

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method to zoom a region of interest from a digital source image, wherein a resolution of the region of interest is either decimated or enlarged to fit into a destination image, comprises the following steps:

(1) define size and location of said region of interest as part of said source image;

(2) calculate scale of conversion in x- and y-direction;

(3) calculate number of rows of pixels of said destination image according to scale of conversion desired in y-direction;

(4) calculate number of pixels contained in a row of pixels of said destination image according to scale of conversion desired in x-direction;

(5) calculate color values of each pixel along the rows of pixels of the destination image by interpolation from nearest row of pixels of said source image wherein the color values of the pixels of the destination image being located between the left side edge of the source image and the first pixel of the nearest row of pixels of the region of interest of the source image and the color values of the pixels of the destination image being located between the right side edge of the source image and the last pixel of the nearest row of the source image are achieved by replicating the color values of said first, or correspondingly said last, pixel of the nearest row of the source image; and

(6) display zoomed region of interest in said destination image.

2. (original) The method of claim 1 wherein a linear interpolation method has been used.
3. canceled
4. (currently amended) The method of claim 1 wherein the color values of the pixels of the destination image being located between the left side edge of the source image and the first pixel of the nearest row of pixels of the region of interest of the source image and the color values of the pixels of the destination image being located between the right
5 side edge of the source image and the last pixel of the nearest row of the source image are achieved by interpolating the color values of said first, or correspondingly said last, pixel of the nearest row of the source image with a neighboring pixels outside the region of interest of the source image.
5. (original) The method of claim 1 wherein said digital image is a color image using any color space.
6. (original) The method of claim 5 wherein said color space is a R-G-B color space.
7. (original) The method of claim 5 wherein said color space is an YCbCr color space.
8. (original) The method of claim 1 wherein said digital image is a video image.
9. (original) The method of claim 1 wherein said digital image is a still image from a digital camera.

- 10.(original) The method of claim 1 wherein said region of interest has the shape of a rectangle.
- 11.(original) The method of claim 1 wherein said destination image has the shape of a rectangle.
- 12.(original) The method of claim 1 wherein said method invented is used to convert the resolution of the region of interest in any direction.
- 13.(original) The method of claim 1 wherein said method invented is implemented using one common software program.
14. (currently amended) A method to zoom a region of interest from a digital source image, wherein a resolution of the region of interest is either decimated or enlarged to fit into a destination image, comprises the following steps:
- (1) define size and location of said region of interest as part of said source image;
 - (2) calculate scale of conversion in x-and y-direction;
 - (3) calculate number of columns of pixels of said destination image according to scale of conversion desired in x-direction;
 - (4) calculate number of pixels contained in a column of pixels of said destination image according to scale of conversion desired in y-direction;
 - (5) calculate color values of columns of pixels of said destination image by interpolation from nearest column of pixels of source image wherein the

color values of the pixels of the destination image being located between the upper side edge of the source image and the first pixel of the nearest column of pixels of the source image and the color values of the pixels of the destination image being located between the bottom side edge of the source image and the last pixel of the nearest column of the source image are achieved by replicating the color values of said first, or correspondingly said last, pixel of the nearest column of the source image.; and

(6) display zoomed region of interest in said destination image.

15. (original) The method of claim **14** wherein a linear interpolation method has been used.

16. canceled

17. (currently amended) The method of claim **14** wherein the color values of the pixels of the destination image being located between the left side edge of the source image and the first pixel of the nearest row of pixels of the region of interest of the source image and the color values of the pixels of the destination image being located between the right side edge of the source image and the last pixel of the nearest row of the source image are achieved by interpolating the color values of said first, or correspondingly said last, pixel of the nearest row of the source image with a neighboring pixels outside the region of interest of the source image.

18.(original) The method of claim **14** wherein said digital image is a color image using any color space.

19. (original) The method of claim 18 wherein said color space is a R-G-B color space.
20. (original) The method of claim 18 wherein said color space is an YCbCr color space.
21. (original) The method of claim 14 wherein said digital image is a video image.
22. (original) The method of claim 14 wherein said digital image is a still image from a digital camera.
23. (original) The method of claim 14 wherein said method invented is used to convert the resolution of the region of interest in any direction.
24. (original) The method of claim 14 wherein said region of interest has the shape of a rectangle.
25. (original) The method of claim 14 wherein said destination image has the shape of a rectangle.
26. (original) The method of claim 14 wherein said method invented is implemented using one common software program.
27. (currently amended) A method to zoom a region of interest from a digital source image, wherein a resolution of the region of interest is either decimated or enlarged to fit into a destination image, comprises the following steps:
- (1) define size and location of said region of interest as part of said source image;

(2) calculate the scale of conversion of the resolution in x-and y-direction;

(3) calculate number of rows of pixels of said destination image according to scale of conversion desired in y-direction;

10 (4) calculate number of pixels contained in a row of pixels of said destination image according to scale of conversion desired in x-direction;

(5) calculate x, y virtual starting point of said destination pixel for each frame;

15 (6) calculate virtual location of first destination pixel for new row in x-direction and interpolate new color values of color space of said first destination pixel from nearest source pixels located at nearest row of source pixels in y-direction wherein the color values of the pixels of the destination image being located between the left side edge of the source image and the first pixel of the nearest row of pixels of the source image
20 and the color values of the pixels of the destination image being located between the right side edge of the source image and the last pixel of the nearest row of the source image are achieved by replicating the color values of said first, or correspondingly said last, pixel of the nearest row of the source image;

25 (7) calculate virtual position of next destination pixel in x-direction according to scale factor and interpolate new color values of color space used of said next pixel from nearest source pixels located at nearest row of source pixels in y-direction wherein the color values of the pixels of the

30 destination image being located between the left side edge of the source
 image and the first pixel of the nearest row of pixels of the source image
 and the color values of the pixels of the destination image being located
 between the right side edge of the source image and the last pixel of the
 nearest row of the source image are achieved by replicating the color
35 values of said first, or correspondingly said last, pixel of the nearest row of
 the source image;

 (8) go to next step (89) if last destination pixel in x-direction has
 been reached otherwise go to step (6);

 (9) go to step (11) if last row of destination pixels has been reached
 otherwise go to next step (910);

40 (10) calculate virtual location of next row in y-direction according to
 scale factor in y-direction and go to step (5); and

 (11) display zoomed region of interest in said destination image.

28.(original) The method of claim 27 wherein a linear interpolation method has been
 used.

29.canceled

30.(currently amended) The method of claim 27 wherein the color values of the pixels of
 the destination image being located between the left side edge of the source image
 and the first pixel of the nearest row of pixels of the region of interest of the source
 image and the color values of the pixels of the destination image being located

5 between the right side edge of the source image and the last pixel of the nearest row of the source image are achieved by interpolating the color values of said first, or correspondingly said last, pixel of the nearest row of the source image with a neighboring pixels outside the region of interest of the source image.

31. (original) The method of claim **27** wherein said digital image is a color image using any color space.

32. (original) The method of claim **31** wherein said color space is a R-G-B color space.

33. (original) The method of claim **31** wherein said color space is an YCbCr color space.

34. (original) The method of claim **27** wherein said digital image is a video image.

35. (original) The method of claim **27** wherein said digital image is a still image from a digital camera.

36. (original) The method of claim **27** wherein said method invented is used to convert the resolution of the region of interest in any direction.

37. (original) The method of claim **27** wherein said region of interest has the shape of a rectangle.

38. (original) The method of claim **27** wherein said destination image has the shape of a rectangle.

39.(original) The method of claim **27** wherein said method invented is implemented using one common software program.

40. (currently amended) A method to zoom a region of interest from a digital source image comprises the following steps:

(1) define size and location of said region of interest as part of said source image;

(2) calculate the scale of decimation in x-and y-direction;

(3) calculate number of columns of pixels of said destination image according to scale of conversion desired in x-direction;

(4) calculate number of pixels contained in a column of pixels of said destination image according to scale of conversion desired in y-direction;

(5) calculate x, y virtual starting point of a destination pixel for each frame;

(6) calculate virtual location of first destination pixel for new column in y-direction and interpolate new color values of color space of said first destination pixel from nearest source pixels located at nearest column of source pixels in x-direction wherein the color values of the pixels of the destination image being located between the left side edge of the source image and the first pixel of the nearest row of pixels of the source image and the color values of the pixels of the destination image being located

20 between the right side edge of the source image and the last pixel of the
nearest row of the source image are achieved by replicating the color
values of said first, or correspondingly said last, pixel of the nearest row of
the source image;

25 (7) calculate virtual position of next destination pixel in y-direction
according to scale factor and interpolate new color values of color space
used of said next pixel from nearest source pixels located at nearest
column of source pixels in x-direction wherein the color values of the
pixels of the destination image being located between the left side edge of
the source image and the first pixel of the nearest row of pixels of the
30 source image and the color values of the pixels of the destination image
being located between the right side edge of the source image and the
last pixel of the nearest row of the source image are achieved by
replicating the color values of said first, or correspondingly said last, pixel
of the nearest row of the source image;

35 (8) go to next step (89) if last destination pixel in y-direction has
been reached otherwise go to step (6);

 (9) go to step (11) if last column of destination pixels has been
reached otherwise go to next step (910);

40 (10) calculate virtual location of next column in x-direction
according to scale factor in x-direction and go to step (5); and

 (11) display zoomed region of interest in said destination image.